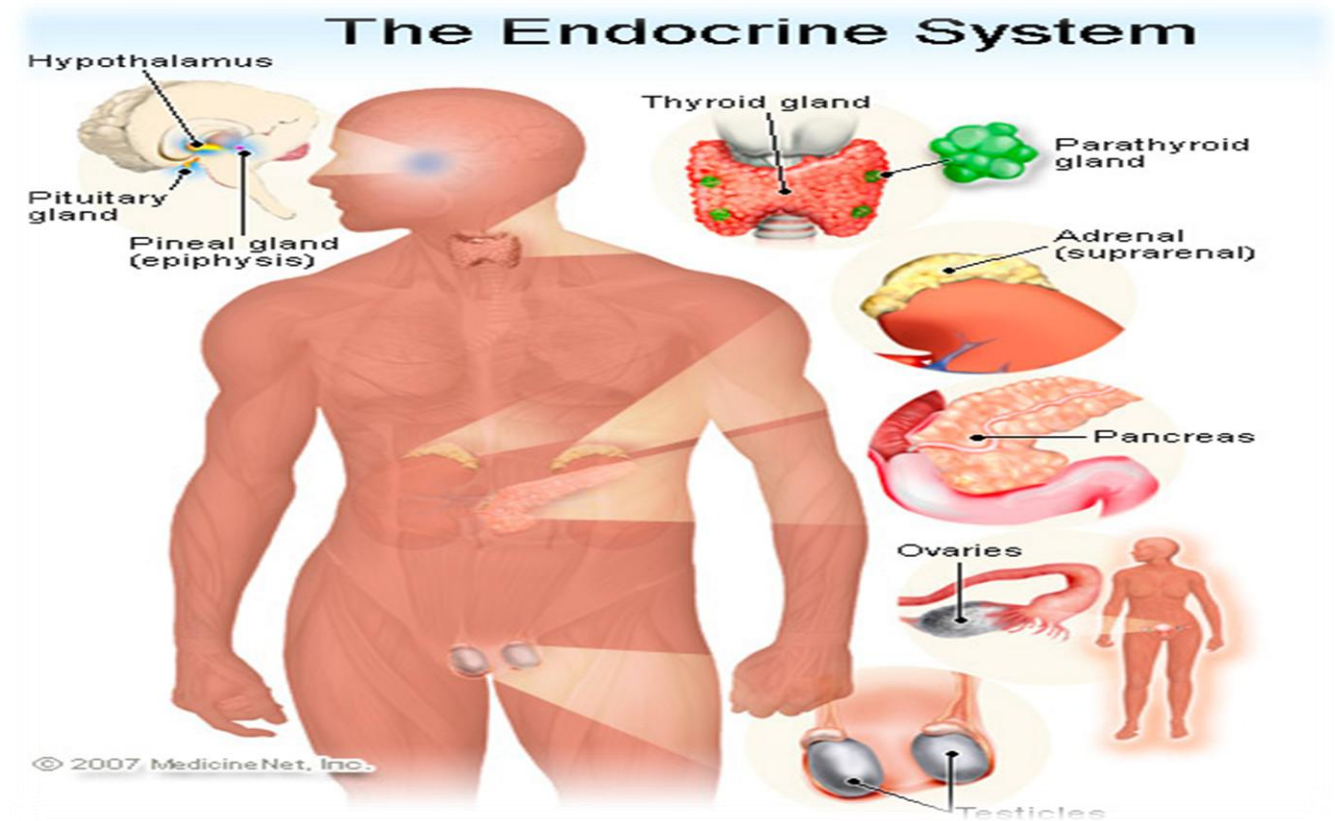


430 MCQ Team  
Endocrine Block  
MCQs for Mid Exam



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# ANATOMY

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**1. Which one of the following air sinuses would be infiltrated by tumor of pituitary gland:**

- a) Ethmoidal
- b) Sphenoidal
- c) Frontal
- d) Maxillary

**Answer: B**

**2. Which one of the following structure lies lateral to pituitary gland:**

- a) Cavernous sinus
- b) Optic chiasma
- c) Mammillary bodies
- d) Diaphragm sellae

**Answer: A**

**3. Which one of the following structure lies anterolaterally to thyroid gland:**

- a) Internal Jugular vein
- b) Common carotid artery
- c) Vagus nerve
- d) Sternothyroid muscle

**Answer: D**

**4. Which one of the following structure lies behind the isthmus of thyroid gland:**

- a) Vagus nerve
- b) Jugular arch
- c) 2nd, 3rd, 4th tracheal rings
- d) Parathyroid gland

**Answer: C**

**5. Which one of the following nerves runs with related to superior thyroid artery:**

- a) Recurrent laryngeal
- b) Glossopharyngeal
- c) Vagus
- d) External laryngeal

**Answer: D**

**6. Which one of the following arteries gives rise to inferior thyroid artery:**

- a) External carotid
- b) Aortic arch
- c) Subclavian
- d) Brachiocephalic

**Answer: C**

**7. Which one of the following structures is superior to the pituitary gland?**

- a) Optic chiasma
- b) Diaphragma sellae
- c) Mammillary bodies
- d) Sphenoidal air sinuses

**Answer: B**

**8. Regarding the pituitary gland, which one of the following statements is correct :**

- a) The hypothalamo-hypophyseal tract connects the hypothalamus to the anterior lobe of pituitary gland.
- b) The anterior lobe of pituitary is the true gland.
- c) The pituitary gland lies in a fossa in the ethmoid bone.
- d) The superior hypophyseal artery supplies the posterior lobe of pituitary

**Answer: B**

**9. Which one of the following statements regarding thyroid gland is incorrect?**

- a) The apex of each lobe is directed upward to the lamina of the thyroid cartilage.
- b) It is enclosed within the pretracheal fascia
- c) The inferior thyroid veins drain into the internal jugular vein
- d) The recurrent laryngeal nerve lies medial to it.

**Answer: C**

**10. The following structures lie anterior to the trachea, EXCEPT:**

- a) Recurrent laryngeal nerves
- b) Isthmus of the thyroid gland
- c) Thyroidea ima artery
- d) Jugular arch

Answer: A

**11. All of the following are Parts of Deep cervical fascia except:**

- a) Investing layer.
- b) Thyroid layer.
- c) Prevertebral layer.
- d) Pretracheal layer.

Answer: B

**12. Regarding blood supply to the thyroid gland:**

- a) superior thyroid artery arise from the external carotid
- b) inferior thyroid vein drain into the internal jugular
- c) thyroidea ima artery if present, arise from subclavian artery
- d) left middle thyroid vein drains into the left brachiocephalic vein

Answer: A

**13. Regarding the pituitary gland which statement is incorrect:**

- a) Both lobes arise from ectoderm
- b) The posterior lobe supplied by the superior hypophyseal artery
- c) The connection between the posterior pituitary and the hypothalamus is neural via the infundibulum
- d) The anterior lobe secretes growth hormone

Answer: B

**14. Which one of the following structures is superior to the pituitary gland:**

- a) Optic chiasma
- b) Diaphragmasellae
- c) Mammillary bodies
- d) Sphenoidal air sinuses

Answer: B

**15. Regarding the pituitary gland, which one of the following statements is correct:**

- a) The hypothalamo-hypophyseal tract connects the hypothalamus to the anterior lobe of pituitary gland.
- b) The anterior lobe of pituitary is the true gland.
- c) The pituitary gland lies in a fossa in the ethmoid bone.
- d) The inferior hypophyseal artery supplies the anterior lobe of pituitary gland.

**Answer: B**

**16. Which one of the following structures is posterior to the pituitary gland:**

- a) Optic chiasma
- b) Diaphragmasellae
- c) Mammillary bodies
- d) Sphenoidal air sinuses

**Answer: C**

**17. Damage to which of the following arteries could cause infarction of the pituitary gland :**

- a) Internal carotid artery.
- b) Posterior superior cerebellar arteries.
- c) Inferior cerebral artery
- d) None of the above

**Answer: A**

**18. Regarding the Diaphragmasellae :**

- a) Fold of dura mater
- b) Covers the pituitary superiorly
- c) Has an opening for the neural stalk
- d) All of the above

**Answer: D**

**19. Regarding the coverings of the thyroid gland :**

- a) It is covered by 2 layers mainly
- b) The pretracheal layer fixes the thyroid gland in position
- c) The pretracheal layer is considered part of the deep fascia of the neck
- d) All of the above

Answer: D

**20. Regarding the lobes of the thyroid gland:**

- a) Connected posteriorly by a narrow isthmus
- b) Its base lies at the level of the first tracheal ring
- c) The apex lies at the level of the oblique line of the thyroid cartilage
- d) None of the above

Answer: C

**21. Regarding the relations of the thyroid gland :**

- a) Sternohyoid muscle posteriorly
- b) Related anteriorly to the vagus nerve
- c) Medially the recurrent laryngeal nerve
- d) Xiphoid process of the sternum anteriorly

Answer: C

**22. Regarding the blood supply of the thyroid gland :**

- a) The superior thyroid artery arises from the common carotid artery
- b) The thyroid ima artery arises from the subclavian artery
- c) The inferior thyroid artery arises from the thyrocervical trunk
- d) The middle thyroid vein drains into the left brachiocephalic vein

Answer: C

# EMBRYOLOGY

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**1. All the following are true about thyroid gland, EXCEPT:**

- a) The first endocrine gland that develop
- b) Developed at 24 day
- c) Descend dorsal to the developing hyoid bone
- d) Has two lobes connected to each other by the isthmus

Answer: C

**2. Thymus gland arises from:**

- a) 2nd pouch
- b) 3rd pouch
- c) 5th pouch
- d) 6th pouch

Answer: B

**3. Parafollicular cells of thyroid arise from:**

- a) Ultimobranchial body
- b) 3rd pouch
- c) 4th pouch
- d) A and C

Answer: D

**4. Thyroid gland originates from:**

- a) Thyroglossal duct
- b) Yolk sac
- c) 1st pharyngeal pouch
- d) 2nd pharyngeal pouch

Answer: A

**5. Superior parathyroid gland originates from:**

- a) 1st arch
- b) 2nd arch
- c) 3rd arch
- d) 4th arch

Answer: D



**6. What is not developed from pharyngeal pouch:**

- a) Palatine tonsil
- b) External auditory meatus
- c) Thymus gland
- d) Parathyroid gland

Answer: B

**7. The common site of the developing congenital thyrocervical cyst is:**

- a) Superior to the hyoid bone.
- b) Inferior to hyoid bone.
- c) In the thorax.
- d) Sublingual.

Answer: (B) and anterior

**8. Inferior parathyroid gland develops from:**

- a) 1st pharyngeal arch.
- b) 2nd pharyngeal arch.
- c) 3rd pharyngeal pouch.
- d) 4th pharyngeal pouch.

Answer: C

**9. Superior parathyroid gland develops from:**

- a) 2nd pharyngeal pouch.
- b) 3rd pharyngeal pouch.
- c) 4th pharyngeal pouch.
- d) 4th pharyngeal arch.

Answer: C

**10. During thyroidectomy operation, which nerve is damaged in relation with superior thyroid artery:**

- a) Internal laryngeal.
- b) External laryngeal.
- c) Vagus.
- d) Recurrent laryngeal.

Answer: B

**11. During thyroidectomy operation, which nerve is damaged in relation with inferior thyroid artery:**

- a) Internal laryngeal.
- b) External laryngeal.
- c) Vagus.
- d) Recurrent laryngeal

**Answer: D**

**12. Which one of the following gives rise to inferior parathyroid gland:**

- a) Dorsal part of 3rd pharyngeal pouch
- b) Dorsal part of 4th pharyngeal pouch
- c) ventral part of 3rd pharyngeal pouch
- d) ventral part of 4th pharyngeal pouch

**Answer: A**

# HISTOLOGY

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**1. Which of the following is NOT a characteristic of the endocrine system:**

- a) Products secreted into blood
- b) Glands with ducts
- c) Secretes hormones
- d) Non localized response

Answer: B

**2. What organ is nicknamed the "master gland":**

- a) Adrenal medulla
- b) Adrenal cortex
- c) Brain
- d) Pituitary

Answer: D

**3. What cell type secretes ACTH?**

- a) Lactotropic cells
- b) Thyrotropic cells
- c) Somatotropic cells
- d) Corticotropic cells

Answer: D

**4. Which cell type is involved in the secretion thyroglobulin?**

- a) Principal cell
- b) Oxyphil cell
- c) Parafollicular cells
- d) Follicular cells

Answer: D

**5. What connects the pituitary to the hypothalamus?**

Pars tuberalis

Infundibulum

Adenohypophysis

Answer: C

**6. Which of the following is not part of the adenohypophysis:**

- a) Pars intermedia
- b) Pars tuberalis
- c) Pars distalis
- d) Pars nervosa

Answer: D

**7. What cell type secretes prolactin:**

- a) Lactotropic cells
- b) Thyrotropic cells
- c) Somatotropic cells
- d) Corticotropic cells

Answer: A

**8. Which of the following cells can be classified as an acidophil:**

- a) Gonadotropic cells
- b) bCorticotropic cells
- c) Thyrotropic cells
- d) Lactotropic cells

Answer: D

**9. Which cell type is also called C cells:**

- a) Principal cell
- b) Oxyphil cell
- c) Parafollicular cells
- d) Follicular cells

Answer: C

**10. Which of the following is not part of the neurohypophysis:**

- a) Median eminence
- b) Pars distalis
- c) Pars nervosa
- d) Infundibular stalk

Answer: B

**11. Which of the following cells can be classified as an acidophil:**

- a) Corticotropic cells
- b) Thyrotropic cells
- c) Gonadotropic cells
- d) None of the above

Answer: D

**12. Which of the following cells can be classified as a basophil:**

- a) Thyrotropic cells
- b) Lactotropic cells
- c) Somatotropic cells
- d) None of the above

**Answer: A**

**13. Which gland secretes T3?**

- a) Pancreas
- b) Thyroid
- c) Pineal gland
- d) Adrenal gland (cortex)

**Answer: B**

**14. What is another term for the anterior lobe of the pituitary?**

- a) Pars intermedia
- b) Pars tuberalis
- c) Pars distalis
- d) Pars nervosa

**Answer: C**

**15. Regarding contents of the pars nervosa which is incorrect:**

- a) The unmyelinated axons have cell bodies in the hypothalamus
- b) Pitucytes Support the axons of the pars nervosa
- c) Herring Bodies have accumulation of neurosecretory granules at axon termini
- d) Numerous schwan cells can be found

**Answer: D**

**16. The supraoptic nucleus of the hypothalamus is believed to control secretion of which of the following hormones:**

- a) Antidiuretic hormone
- b) Oxytocin
- c) Growth hormone
- d) Adrenocorticotrophic hormone

**Answer: A**

**17. Which one of the following hormones is secreted by the posterior pituitary gland :**

- a) Adrenocorticotrophic hormone (ACTH)
- b) Oxytocin
- c) Thyroid-stimulating hormone (TSH)
- d) Prolactin

**Answer: B**

**18. Regarding the hypothalamic-hypophyseal portal vessels :**

- a) The secondary capillary plexus forms the long hypophyseal portal vessels
- b) The primary capillary plexus forms the short hypophyseal portal vessels
- c) The blood supply of the anterior pituitary is mostly venous blood
- d) They provide most of the blood supply to the posterior lobe

**Answer: C**

**19. Regarding the blood supply of the pars distalis, which one is incorrect:**

- a) Superior hypophyseal artery gives the extensive primary capillary plexus
- b) The plexus is drained by pituitary portal veins
- c) The capillaries of both plexuses are fenestrated
- d) Originates from the posterior hypophyseal artery

**Answer: D**

**20. Regarding the follicles of the thyroid gland:**

- a) Lined by simple squamous epithelium
- b) The majority of cells are parafollicular cells
- c) Parafollicular cells are the larger cells of the follicle
- d) Follicles are devoid of basal lamina

**Answer: C**

**21. Regarding clear cells of the thyroid gland:**

- a) Do not reach the lumen of the follicle
- b) Found in clusters most of the time
- c) Their numbers are low compared to principal cells
- d) All of the above

**Answer: D**

**22. Which of the following structures found in pars nervosa:**

- a) Pituicyte
- b) Myelinated axons
- c) Cell bodies of nerve cells
- d) Portal circulation

**Answer: A**

**23. Which of the following structures participate in hypophyseal portal circulation:**

- a) Inferior hypophyseal artery
- b) Pars nervosa
- c) Median eminence
- d) Herring bodies

**Answer: C**

**24. Which of the following features is observed in thyroid follicle:**

- a) Its lumen contains acidophilic material
- b) Its wall is formed of stratified epithelium
- c) Its lumen contains fenestrated blood capillaries
- d) Its lumen contains few parafollicular cells

**Answer: A**

# PHYSIOLOGY

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**1. Which one of the following factors inhibit thyroxine release :**

- a. Thyrotropin releasing hormone (TRH)
- b. Cold climate
- c. Low level of thyroxine binding globulin (TBG)
- d. Thyroid stimulating immunoglobulins (TSI)

Answer: C

**2. Which one of the following hormones has the greatest effect on basal metabolic rate:**

- a. Growth hormone
- b. Cortisol
- c. Somatostatin
- d. Thyroxine

Answer: D

**3. All of the following are derivatives of the amino acid tyrosine except:**

- a. Thyroxine
- b. Triiodo thyronine
- c. Glucagon
- d. Epinephrine

Answer: C

**4. Which of the following is a glycoprotein in nature:**

- a. Growth hormone
- b. Anti diuretic hormone
- c. Acetylcholine
- d. Thyroid stimulating hormone

Answer: D

**5. Thyroid gland :**

- a. Not present in all vertebrates
- b. Functional units is called follicles
- c. Follicular cells secrete principally T3
- d. Inactive cells tend to be columnar

Answer: B



**6. Factors increases thyroxine binding globulins are:**

- a. Pregnancy
- b. Cirrhosis if the liver
- c. Nephritic syndrome
- d. Myxedema

Answer: A

**7. Which one of the following gland stores its own secretory products:**

- a. Thyroid gland
- b. Parathyroid gland
- c. Pituitary gland
- d. Adrenal gland

Answer: A

**8. Factors increases T3 and T4 secretion are :**

- a. Excitement
- b. Anxiety
- c. Negative feedback by excessive T3 and T4
- d. Lack of iodine

Answer: E

**9. T3 and T4 are important for :**

- a. Mental development
- b. Physical growth
- c. Sexual maturation
- d. Normal reproduction
- e. All of the above

Answer: E

**10. Thyroid hormone decreases:**

- a. Rate of absorption of carbohydrates
- b. Circulating cholesterol levels
- c. O<sub>2</sub> consumption in almost all metabolically active tissue
- d. Nitrogen excretion

Answer: B

**11. Thyroid hormone increases all of the following except:**

- a. Heart rate
- b. Venous return
- c. Cardiac output

- d. Blood volume
- e. Blood pressure and mean arterial pressure

Answer: E

**12. Thyroid hormone stored in the lumen of follicles is in the form of :**

- a. Free T3
- b. Free T4
- c. Attached to thyroglobulin in the gland
- d. Attached to thyroid binding globulin

Answer: C

**13. Thyroid binding globulins are normal in:**

- a. hyperthyroidism
- b. pregnancy
- c. patients treated with glucocorticoids
- d. patients treated with estrogens

Answer: A

**14 . In starvation which of the following is reduced :**

- a. plasma T4
- b. plasma T3
- c. reverse tri-iodothyronine
- d. D thyroxine

Answer: B

**15. The metabolic rate is least affected by an increase in the plasma levels of :**

- a. TSH
- b. TRH
- c. TBG
- d. none of the above

Answer: C

**16. The coupling of mono iodotyrosine and di-iodotyrosine and the iodination of thyroglobin is blocked by:**

- a. TSH
- b. TRH
- c. iodine
- d. thiocarbamides such as propylthiouracil

**Answer: D**

**17. Thyroid hormones:**

- a. Are free (unbound) to plasma proteins.
- b. Produced their effect on target cells by causing gene expression.
- c. Inhibit glucose absorption.
- d. Are only regulated by the hypothalamic thyrotropin releasing hormone.

**Answer: B**

**18. Thyroid hormone (a small iodinated amine) enters target cells in a manner similar to:**

- a. Insulin, because insulin is a small peptide.
- b. Steroid hormones, because both diffuse easily into target cells.
- c. Growth hormone, because the thyroid works synergistically with thyroid hormone.
- d. Glucagon, because the structure of the glucagon is similar to that of thyroid hormone.

**Answer: B**

**19. The colloid is made mainly of:**

- a. Ca
- b. MIT
- c. DIT
- d. Thyroglobin

**Answer: D**

**20. Which one of the following is the most secreted hormone:**

- a.T4
- b.T3
- c.MIT
- d. DIT

Answer: A

**21. Which one of the following is the most active thyroid hormone:**

- a.DIT
- b.T4
- c.MIT
- d.T3

Answer: D

**22. Regarding the regulation of thyroid secretion:**

- a.T4 & T3 will have a positive feedback on the hypothalamus
- b.T4 & T3 will have a negative feedback on the anterior pituitary
- c.T4 & T3 will have a negative feedback on the posterior pituitary
- d.T4 & T3 will have a negative feedback on the thyroid

Answer: B

**23. Iodides are stored in the thyroid follicles mainly in the form of**

- a.T4
- b.Thyroglobulin
- c.MIT
- d.DIT

Answer: B

**24. The basal metabolic rate increases with**

- a.Anxiety
- b.Reduced environmental temperature
- c.Increased environmental temperature
- d.Body surface area

Answer: D

**25. When a person is in the fasting state:**

- a. Liver glycogen levels are increased
- b. The excretion of urea in the urine decreases
- c. Basal metabolic rate (BMR) decreases
- d. Glucose is the only fuel used by the central nervous system

Answer: C

**26. Compared with the resting state, during prolonged exercise, the caloric needs of skeletal muscle are met by :**

- a. Release of free fatty acids from adipose tissue
- b. An increase in hepatic glycogenolysis
- c. An increase in gluconeogenesis in muscle
- d. Increased intestinal uptake of glucose and amino acids

Answer: B

**27. Regarding the synthesis of thyroid hormones, which one of the following is TRUE :**

- a. It is totally intracellular
- b. It is totally extracellular
- c. It is partially intracellular and partially extracellular
- d. None of the above

Answer: C

**28. Regarding the Na/I cotransport pump, which one of the following is FALSE:**

- a. Low levels of I<sup>-</sup> stimulate the pump
- b. It is inhibited by thiocyanate
- c. High levels of I<sup>-</sup> stimulate the pump
- d. It's called Iodine trap

Answer: C

**29. Regarding Thyroxine-Binding Globulin (TBG), choose the CORRECT answer:**

- a. It increases in hepatic failure
- b. Estrogen increases the level of TBG
- c. High TBG levels indicate more unbound (free) thyroid hormones
- d. Low TBG levels stimulate the production of T3 and T4

Answer: B

**30. T4 is converted to T3 in the target tissues by the action of :**

- a. Thyroid peroxidase
- b. 21-hydroxylase
- c. 5'-iodinase
- d. Protease

Answer: C

**31. During the fetal life, TSH is secreted in:**

- a. Week 13
- b. Immediately after birth
- c. Week 7
- d. Day 24

Answer: A

**32. The negative feedback on TRH is mediated by :**

- a. Bound T4
- b. Free T3
- c. High levels of TBG
- d. High levels of Iodine

Answer: B

**33. One of the effect of thyroid hormones is increased oxygen consumption by increasing which one of the following :**

- a. Body temperature
- b. Glucose absorption
- c. Beta-adrenergic receptors
- d. Na/K ATPase

Answer: D

**34. The majority effects of thyroid hormones is :**

- a. Anabolic
- b. Catabolic
- c. Both anabolic and catabolic
- d. None of the above

**Answer: B**

**35. Thyroid hormones mainly interact in autonomic nervous system with:**

- a. Sympathetic nervous system
- b. Parasympathetic nervous system
- c. They do not interact with autonomic nervous system
- d. None of the above

**Answer: A**

**36. All of the following is true regarding thyroid function test except:**

- a. TSH measurement is the first line of treatment
- b. In hypothyroidism TSH levels are low
- c. T4 levels are used to monitor anti-thyroid treatment
- d. T3 levels are used for earlier identification of thyrotoxicosis

**Answer: B**

**37. Which one of the following hormones has the greatest effect on basal metabolic rate:**

- a) Growth hormone
- b) Cortisol
- c) Somatostatin
- d) Thyroxine

**Answer: D**

**38. Which one the following factors inhibit thyroxine hormone realease:**

- a. Thyrotropin releasing hormone (TRH)
- b. Cold climate
- c. Low level of thyroxine binding globulin (TBG)
- d. Thyroid stimulating immunoglobulins (TSI)

**Answer: C**

**39. Hyperthyroidism is characterized by**

- a. Anorexia
- b. Increased basal metabolic rate
- c. Bradycardia
- d. Increased weight gain
- e. Decreased sweating

**Answer: B**

**40. A person with hypothyroidism would exhibit**

- a. Tachycardia
- b. Increased metabolic rate
- c. Heat intolerance
- d. Sleepiness

**Answer: D**

**41. Which one of the following is a feature of grave's disease:**

- a. Myxedema
- b. Exophthalmos
- c. Decreased heart rate
- d. Increased musculature

**Answer: B**

**42. Which one of the following laboratory results will be expected in secondary hypothyroidism:**

- a. High T3 – high T4 - low TSH
- b. High T3 – low T4 - low TSH
- c. Low T3 – low T4 - low TSH
- d. Low T3 – high T4 - high TSH

**Answer: C**



**43. Paracrine communication refers to interactions between cells resulting from:**

- a. Direct contact of cells at tight junction
- b. Transmission of mechanical forces via extracellular filaments
- c. Release of chemical mediators in localized synaptic junctions
- d. Release and diffusions of chemical mediators through extracellular fluids to target cells

**Answer: D**

**44. The supraoptic nucleus of the hypothalamus is believed to control secretion of which of the following hormones ?**

- a. Antidiuretic hormone (arginine vasopressin)
- b. Oxytocin
- c. Growth hormone
- d. Adrenocorticotrophic hormone

**Answer: A**

**45. The secretion of growth hormone is increased by:**

- a. Hyperglycemia
- b. Exercise
- c. Somatostatin
- d. Hypothermia
- e. Free fatty acid

**Answer: B**

**46. Which one of the following statements about prolactin is correct?**

- a. Prolactin initiates ovulation
- b. Prolactin causes milk ejection during suckling
- c. Prolactin inhibits the growth of breast tissue
- d. Prolactin secretion is tonically inhibited by the hypothalamus
- e. Prolactin secretion is increased by dopamine

**Answer: D**

**47. Regarding the mechanism of steroid hormones:**

- a. They act slowly through nuclear receptors
- b. They quickly through cell surface receptors
- c. They utilize the adenyl cyclase and phospholipase C
- d. They do not cross the cell membrane

Answer: A

**48. Regarding the Hormones, which one of the following is correct:**

- a. They are categorised into 4 classes: peptides, steroids, amines and proteins
- b. Neural substances
- c. Most of them are peptide in nature
- d. None of the above

Answer: C

**49. Regarding the steroid hormone synthesis:**

- a. They are synthesized in hypothalamus
- b. They are secreted from pituitary gland
- c. They are derivatives of cholesterol
- d. All of the above

Answer: D

**50. Regarding the regulation of hormone secretion:**

- a. Neural mechanisms are more common than feedback mechanisms
- b. Positive feedback represents most of the feedbacks of hormones
- c. The primary example of negative feedback is the effect of Estrogen on FSH and LH
- d. Negative feedback is self-limiting and positive feedback is self-augmenting

Answer: D

**51. Regarding the mechanism of hormone actions, which one is correct:**

- a. G proteins are monomeric
- b. GDP activates G proteins
- c. Gs and Gi proteins represent, respectively, stimulatory and inhibitory G proteins
- d. GTP is bound to the Beta subunit of G protein to activate it

Answer: C

**52. The second messenger for adenylyl cyclase mechanism is:**

- a. IP3 \ Ca<sup>2+</sup>
- b. G protein
- c. cAMP
- d. protein kinase

Answer: C

**53. The secretion of growth hormone is increased by:**

- a. Hyperglycemia
- b. Exercise
- c. Somatostatin
- d. Hypothermia

Answer: B

**54. Which one of the following hormones is secreted by the anterior pituitary gland?**

- a. Anti diuretic hormone
- b. Adrenocorticotrophin hormone
- c. Testosterone
- d. Calcitonin

Answer: B

**55. All of the following are derivatives of the amino acid tyrosine except:**

- a. Thyroxine
- b. Triiodo thyronine
- c. Glucagon
- d. Epinephrine

Answer: C

**56. Which one of the following statements about prolactin is correct?**

- a. Prolactin causes milk ejection during suckling
- b. Prolactin inhibits the growth of breast tissue
- c. Prolactin secretion is tonically inhibited by the hypothalamus
- d. Prolactin secretion is increased by dopamine

Answer: C

**57. Correct statements about human growth hormone include which of the following?**

- a. It is synthesized in the hypothalamus
- b. It stimulates production of somatomedins by the liver
- c. Its release is stimulated by somatostatin
- d. It causes a decrease in lipolysis

Answer: B

**58. The basic effects of growth hormone on body metabolism include:**

- a. Decreasing the rate of protein synthesis
- b. Increasing the rate of use of carbohydrate
- c. Increasing the use of fats for energy
- d. Inhibition of insulin-like growth factor 1

Answer: C

**59. A patient is diagnosed with acromegaly. Patients with this disease typically have:**

- a. Decreased gluconeogenesis
- b. Hypoglycemia
- c. Insulin resistance
- d. Decreased protein synthesis

Answer: C

**60. Prolactin secretion is tonically suppressed in nonpregnant women by:**

- a. Estrogens
- b. Progesterone
- c. Dopamine
- d. FSH

Answer: C

**61. Growth hormone excess causes**

- a. Acromegaly in children
- b. Increased utilization of glucose by the cells
- c. Gigantism, if not occurs before epiphysis are closed
- d. Hypoglycaemia

Answer: C

**62. Excess release of ACTH will lead to**

- a. ↓ CRH
- b. Atrophy of the adrenal gland
- c. Addison's disease

Answer: C

**63. Hypopituitarism is characterized by**

- a. Infertility
- b. Intolerance to heat
- c. Weight loss
- d. Excessive growth of the soft tissue

Answer: A

**64. The supraoptic nucleus of the hypothalamus is believed to control secretion of which of the following hormones :**

- a. Antidiuretic hormone
- b. Oxytocin
- c. Growth hormone
- d. Adrenocorticotrophic hormone

Answer: A

**65. Which one of the following hormones is secreted by the posterior pituitary gland:**

- a. Adrenocorticotrophic hormone (ACTH)
- b. Oxytocin
- c. Thyroid-stimulating hormone (TSH)
- d. Prolactin

Answer: B

**66. The hormone involved in the ejection of milk from a lactating mammary gland is:**

- a. Prolactin
- b. Growth hormone
- c. FSH
- d. Oxytocin

**Answer: D**

**67. The peptide precursor for ADH is:**

- a. Prepro-oxyphysin
- b. Preproressophysin
- c. POMC
- d. None of the above

**Answer: B**

**68. Mechanism of action of ADH:**

- a. Insertion of water channels (pores) into basolateral membrane
- b. Insertion of water channels into luminal (apical) membrane
- c. Removal of water pores from apical membrane
- d. Increased Na<sup>+</sup> uptake in DCT

**Answer: B**

**69. Central diabetes insipidus could be a defect in all the following except:**

- a. Defect in hypothalamus
- b. Defect in pituitary stalk
- c. Defect in posterior pituitary
- d. Abnormality in the vasopressin-2 receptor

**Answer: D**

**70. Which of the following causes SIADH:**

- a. Small cell cancer of the lung
- b. Pneumonia
- c. Drugs
- d. All of the above

**Answer: D**

**71. Prolactin is synthesized by:**

- a. Somatotrophs
- b. Thyrotrophs
- c. Lactotrophs
- d. Gonadotrophs

**Answer: C**

# BIOCHEMISTRY

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**1. Which one of the following mechanisms best describes the action of ADH on renal tubules?**

- a. Production of cAMP
- b. Activation of phospholipase C
- c. Production of cGMP
- d. Enhancing the transcription activity of target genes

Answer: A

**2. Which one of the following is an active form of vitamin D?**

- a. 7-dehydrocholesterol
- b. Cholecalciferol
- c. 25-hydroxycholecalciferol
- d. 1,25-dihydroxycholecalciferol

Answer: D

**3. Which one of the following hormones uses tyrosine kinase mechanism for its action?**

- a. LH
- b. Insulin
- c. TRH
- d. Oxytocin

Answer: B

**4. Insulin:**

- a. Inhibits glycogenolysis in the liver
- b. Inhibits deposition of fats in adipose tissue
- c. Activates the hormone sensitive lipase
- d. Maximum insulin response occurs at 175mg/dl

Answer: A



**5. Regarding the mechanism of steroid hormones:**

- a. They act slowly through nuclear receptors
- b. They quickly through cell surface receptors
- c. They utilize the adenylyl cyclase and phospholipase C
- d. They do not cross the cell membrane

Answer: A

**6. Regarding the Hormones, which one of the following is correct:**

- a. They are categorised into 4 classes: peptides, steroids, amines and proteins
- b. Neural substances
- c. Most of them are peptide in nature
- d. None of the above

Answer: C

**7. Regarding the steroid hormone synthesis:**

- a. They are synthesized in hypothalamus
- b. They are secreted from pituitary gland
- c. They are derivatives of cholesterol
- d. All of the above

Answer: C

**8. Regarding the mechanism of hormone actions, which one is correct:**

- a. G proteins are monomeric
- b. GDP activates G proteins
- c. Gs and Gi proteins represent, respectively, stimulatory and inhibitory G proteins
- d. GTP is bound to the Beta subunit of G protein to activate it

Answer: C

**9. The second messenger for adenylyl cyclase mechanism is :**

- a. IP3 \ Ca<sup>2+</sup>
- b. G protein
- c. cAMP
- d. Protein kinase

Answer: C

**10. The second messenger for phospholipase C mechanism is :**

- a. Gq protein
- b. PIP2
- c. IP3 \ Ca<sup>2+</sup>
- d. cAMP

Answer: C

**The second messenger for steroid hormones is :**

- a. cAMP
- b. IP3 \ Ca<sup>2+</sup>
- c. Tyrosin kinase
- d. None of the above

Answer: D

**12. Which of the following is an active form of thyroid hormones?**

- a. Thyroglobulin-T4
- b. ReverseT3 (rT3)
- c. Transthyretin-T3
- d. Thyroxine (T4)

Answer: D

**14. Which one of the following is first line thyroid function?**

- a. Free T3
- b. TSH and total T4
- c. Free T4
- d. TSH and total T3

Answer: B

**14. The negative feedback on TRH is mediated by:**

- a. Bound T4
- b. Free T3
- c. High levels of TBG
- d. High levels of Iodine

Answer: B

**15. All of the following is true regarding thyroid function test except:**

- a. TSH measurement is the first line of treatment
- b. In hypothyroidism TSH levels are low
- c. T4 levels are used to monitor anti-thyroid treatment
- d. T3 levels are used for earlier identification of thyrotoxicosis

Answer: B

**16. All of the following are causes of hypothyroidism except:**

- a. Hashimoto's disease
- b. TSH deficiency
- c. Grave's disease
- d. Severe iodine deficiency

Answer: C

**17. All of the following are clinical features of hyperthyroidism except:**

- a. Weight loss
- b. Palpitation
- c. Constipation
- d. Heat intolerance

Answer: C

## PATHOLOGY

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**1. A 55 year old women is found to have diffuse enlargement of thyroid gland with circulating anti-thyroid antibodies. A partial thyroidectomy is performed. What is the most likely histological finding:**

- a. Proliferation of neoplastic cells arranged in papillae with fibrosed vascular core
- b. Thyroid follicles showing hurthle cell changes with infiltration of lymphocyte and plasma cell
- c. Diffuse fibrosis with destruction of thyroid follicles
- d. Thyroid follicle of variable size and shapes

**Answer: B**

**2. A 27 old women with feature of hyperthyroidism had thyroid gland excision, the histological section taken from excised thyroid showing hyperplastic thyroid follicles lined by columnar cell with papillary infolding inside the follicles and the colloid. What is the most likely diagnosed?**

- a. Nodular goiter
- b. Papillary carcinoma
- c. Tall cell variant of papillary carcinoma
- d. Graves disease

**Answer: D**

**3. Which of the following causes of hypothyroidism is classified as secondary hypothyroidism:**

- a. Hashimoto thyroiditis
- b. Thyroid dysgenesis
- c. Surgical damage
- d. Pituitary insufficiency

**Answer: D**

**4. Regarding grave's disease:**

- a. Bilateral diffuse enlargement of the gland occurs

- b. Exophthalmous is a common manifestation
- c. IgG anti body to TSH receptors are present in the serum
- d. All of the above

Answer: D

**5. In hashimoto thyroiditis which is correct:**

- a. Females are affected more than males
- b. Gradual thyroid failure by autoimmune destruction of the thyroid gland
- c. Under the microscope hurthel cells are present
- d. All of the above

Answer: D

**6. Which of the following describes thyroiditis with severe fibrosis and infiltration:**

- a. Reidel thyroiditis
- b. Arnold-chiari change
- c. Oncotic change of hashimoto thyroiditis
- d. Infectious thyroiditis

Answer: A

**7. A 52 years old women had a thyroid excision. Histological examination revels a solitary 2 cm encapsulated nodule. What is the histological feature which would help in differentiation between follicular adenoma from carcinoma ?**

- a. Cellular atypia and nuclear pleomorphism
- b. Inflammatory infiltration of the neoplasm
- c. Capsular and/or vascular invasion
- d. The mitotic activity

Answer: C

**8. Which one of the following is most common type of malignant thyroid tumor?**

- a. Follicular carcinoma
- b. Lymphoma
- c. Anaplastic carcinoma
- d. Papillary carcinoma

Answer: D

**9. Which of the following is commonly associated with clinical picture of thyrotoxicosis?**

- a. Hyperfunctional multinodular goiter
- b. Medullary thyroid carcinoma
- c. Pituitary adenoma
- d. Papillary thyroid carcinoma

**Answer: A**

**10. Which one of the following thyroid carcinomas that goes first to blood so it will metastasize in lungs and bones:**

- a. Follicular carcinoma
- b. Medullary carcinoma
- c. Anaplastic carcinoma
- d. Papillary carcinoma

**Answer: A**

**11. Which one of the following thyroid carcinomas that metastasizes in lymph nodes:**

- a. Follicular carcinoma
- b. Medullary carcinoma
- c. Anaplastic carcinoma
- d. Papillary carcinoma

**Answer: D**

## PHARMACOLOGY

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**1. Which of the following is a mechanism of thiomide?**

- a. They block release of TRH
- b. Inhibit uptake of iodide by thyroid cell
- c. They block iodination and coupling of tyrosine in thyroglobulin
- d. They inhibit release of thyroxine from thyroid gland

Answer: C

**2. In which of the following disease levothyroxine (T<sub>4</sub>) is the drug of the choice:**

- a. Graves disease
- b. Thyroid storm
- c. Carcinoma of the thyroid gland
- d. Myxoedema

Answer: D

**3. Which of the following is used to adjust thyroxine dose in hypothyroid patient?**

- a. serum TSH level
- b. pulse rate
- c. Body weight
- d. serum liothyronine level

Answer: A

**4. A pregnant asthmatic woman complained with excessive sweating, anxiety, tremor and loss of weight. She was diagnosed with Grave's disease. Which of the following drugs is safest to give such a case?**

- a. Radioactive iodine therapy
- b. Propylthiouracil
- c. Methimazole
- d. Propranolol

Answer: B

**5. An elderly person was brought to emergency room diagnosed with hyperthyroid storm. Which of the following would be optimum to cardiac symptoms in such condition?**

- a. Propylthiouracil
- b. Methimazole
- c. Radioactive iodine
- d. Propranolol

**Answer: D**

**6. Radioiodines I 131 is suitable for:**

- a. Elderly patients (over 45 years)
- b. Pregnant women
- c. Nursing mothers
- d. Younger patients

**Answer: B**

**7. A daily administration of large doses of iodide to a thyrotoxic patient causes:**

- a. Involution of the thyroid which reaches a maximum in two weeks
- b. Increased vascularity of the thyroid gland
- c. Decreased storage of the colloid in the thyroid gland
- d. Thyroid gland growing firm and less vascular

**Answer: D**

**8. Preparation of choice for thyroid replacement?**

- a. Dessicated thyroid
- b. Liothyronine
- c. Levothyroxine
- d. Propylthiouracil

**Answer: C**

**9. Hyperthyroidism can be treated by all but which one of the following?**

- a. Triiodothyronine.
- b. Surgical removal of the thyroid gland.
- c. Iodide.
- d. Propylthiouracil.

**Answer: A**



**10. Methimazole reduces serum concentrations of T3 primarily by which of the following?**

- a. Accelerating the peripheral metabolism of T3
- b. Inhibit the proteolysis of TBG
- c. Inhibits the secretion of TSH
- d. Inhibit the uptake of iodide by cells in the Thyroid
- e. Prevents the addition of iodine to tyrosine residues on thyroglobulin.

**Answer: E**

**11. Though rare, a serious toxicity associated with thiomides is which of the following?**

- a. Torsade de pointes arrhythmia
- b. Lupus like syndrome
- c. Thrombotic thrombocytic purpura (TTP)
- d. Agranulocytosis

**Answer: D**

**12. A 65 year old man with multi nodular goiter is scheduled for a near-total thyroidectomy. Which of the following drugs will be administered for 10-14 days before surgery to reduce the vascularity of his thyroid gland?**

- a. Levothyroxine
- b. Liothyronine
- c. Potassium iodide
- d. Radioactive iodine
- e. Prednisone.

**Answer: C**

**13. When initiating T4 therapy for an elderly patient with long standing hypothyroidism, it is important to begin with small doses to avoid which of the following?**

- a. A flare-up of exophthalmos
- b. Acute renal failure
- c. Seizures
- d. Hemolysis
- e. Overstimulation of the heart

**Answer: E**